

WHAT IS CLAIMED:

1. A method for enabling recovery of lost payload blocks, the method comprising the steps of:

5 (a) transmitting a sequence of packets from a source node to a destination node, each packet in said sequence having a plurality of payload blocks;

(b) determining whether at least one of the plurality of said payload blocks within a particular packet is lost in said transmission;

10 (c) storing other payload blocks that are successfully received within said particular packet in a storage medium for subsequent retrieval;

(d) subsequently transmitting a request for retransmission of said particular packet containing said lost payload block to said source node; and,

15 (e) combining said stored payload blocks with said lost payload block retrieved from said subsequent transmission in sequential order.

2. The method of claim 1, further comprising the step of monitoring link quality associated with the at least one of the plurality of said payload blocks.

3. The method of claim 1, further comprising the step of counting a number of
20 erroneously received payload blocks during said transmission.

4. The method of claim 1, wherein said step (b) further comprises the step of performing error-correction to recover said lost payload blocks.

5. The method of claim 4, wherein if said error-correction fails, performing said steps (c) through (e).

6. The method of claim 1, wherein said step (d) further comprises the step of retrieving said lost payload block from said subsequent transmission.

7. The method of claim 1, wherein said step (d) further comprises the steps of:
determining whether the payload block corresponding to said lost payload from said subsequent transmission is received successfully;
if yes, performing said step (e); and,
if no, requesting for retransmission of said particular packet containing said lost payload block again.

8. A method for enabling recovery of lost payload blocks, the method comprising the steps of:

(a) receiving a sequence of encoded signals by a destination node from a source node;

5 (b) decoding each received signal in accordance with a particular decoding format to generate a plurality of decoded frames, each decoded frame having a plurality of payload blocks;

(c) examining the plurality of decoded frames to identify a number of erroneously received payload blocks within a particular decoded frame;

10 (d) storing other payload blocks that are successfully received within said particular frame in a storage medium for subsequent retrieval;

(e) subsequently transmitting a request for retransmission of said particular frame with said erroneously received blocks; and,

15 (f) combining said stored payload blocks with said erroneously received payload block retrieved from said subsequent transmission in sequential order.

9. The method of claim 8, further comprising the step of demodulating the encoded signals in accordance with a particular demodulation format to generate the plurality of said decoded frames.

20 10. The method of claim 8, wherein the demodulation format is specified by the IEEE 802.11 standard.

11. The method of claim 8, wherein encoded signals include employing a Reed-Solomon block coder.

12. The method of claim 8, further comprising the step of performing error-correction to recover said erroneously received payload blocks.

13. The method of claim 8, wherein if said error-correction fails, performing said steps (d) through (f).

14. The method of claim 8, wherein said step (e) further comprises the steps of:
determining whether the payload block corresponding to said lost payload from said subsequent transmission is received successfully;
if yes, performing said step (f); and,
if no, requesting for retransmission of said particular packet containing said lost payload block again.

15. An apparatus for enabling recovery of lost payload blocks in a packet switch network in which a sequence of packets is transmitted from a source node to a destination node, each packet in said sequence containing a number of payload blocks, comprising:

a memory;

5 a processor;

a set of machine language instructions stored in said memory and executed by said processor, said processor configured to:

determine whether at least one of the plurality of said payload blocks within a particular packet is lost in said transmission;

10 store other payload blocks that are successfully received within said particular packet in a storage medium for subsequent retrieval;

subsequently transmit a request for retransmission of said particular packet containing said lost payload block to said source node; and,

15 combine said stored payload blocks with said lost payload block retrieved from said subsequent transmission in sequential order.

16. The apparatus of claim 15, wherein the apparatus is included within a telecommunication receiver of a wireless network.

17. A system for enabling recovery of lost payload blocks in a packet switch network, comprising:

a demodulator configured to receive and demodulate a modulated signal to generate a sequence of demodulated packets, each packet in said sequence having a predetermined number of payload blocks;

a decoder operatively coupled to said demodulator for decoding said demodulated packets into a plurality of decoded frames;

a processor coupled to said decoder for examining the plurality of decoded frames to identify a number of erroneously received payload blocks within a particular decoded frame;

a storage means for storing other payload blocks that are successfully received within a particular frame for subsequent retrieval;

means for subsequently transmitting a request for the retransmission of said particular frame having said erroneously received blocks; and,

means for combining said stored payload blocks with said erroneously received payload block retrieved from said subsequent transmission in sequential order.

18. The system of claim 17, further comprising an error-correction means for performing error-correction to recover said erroneously received payload blocks.

19. The method of claim 17, wherein the demodulation format is specified by the IEEE 802.11 standard.